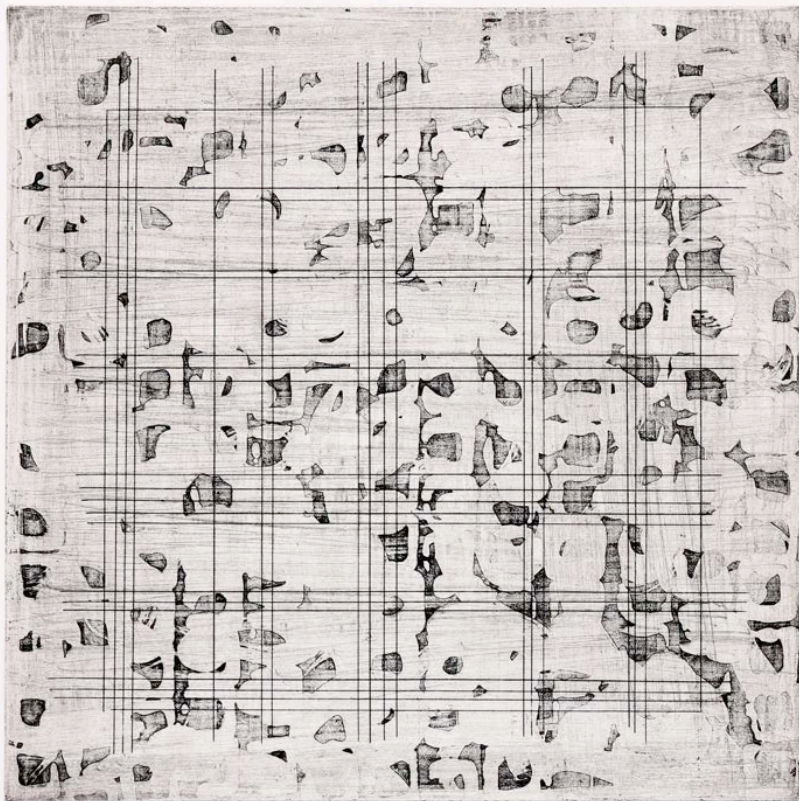


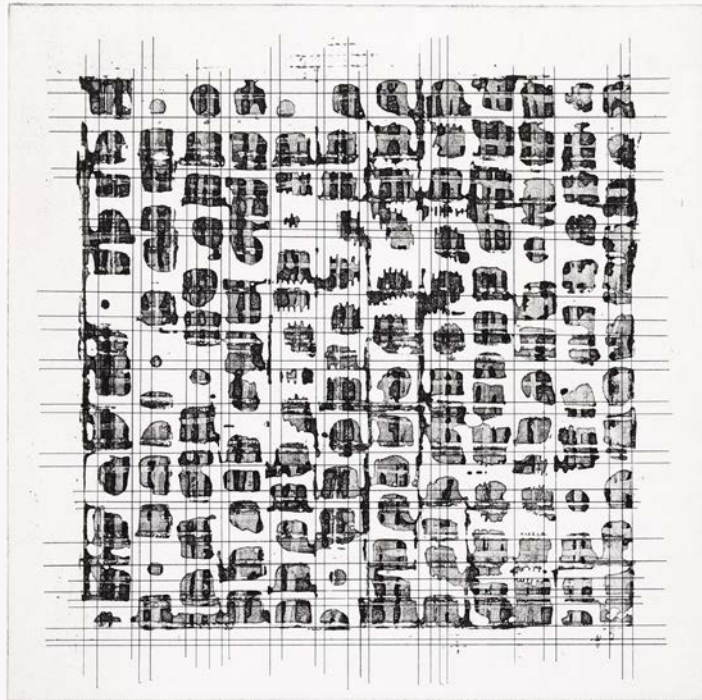
# For Prints' Sake

Michelle Keegan



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**Figure 1. (cover)**  
Still Navigating 1  
Etching on zinc 30x30cm



# For Prints' Sake

Michelle Keegan

Huddersfield Art Gallery, 7 Nov 2015—2 Jan 2016

This exhibition will present stunning new work by Michelle Keegan, winner of the 2014 West Yorkshire Print Workshop Flourish Award for Excellence in Printmaking.

Huddersfield Art Gallery, Princess Alexandra Walk, Huddersfield, HD1 2SU  
t: 01484 221964 w: [www.kirklees.gov.uk/museums](http://www.kirklees.gov.uk/museums)

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## Title

This practice-led research, entitled *For Prints' Sake*, resulted in a series of prints that explored 'less toxic' techniques for etching print processes. The work was exhibited at the Huddersfield Museum and Art Gallery as a result of the Flourish Award for excellence in printmaking and the residency prize undertaken at West Yorkshire Print Workshop. The solo exhibition consisted of 32 etchings.

## Submission Details

Researcher	Michelle Keegan
Collaborators	None
Title	For Prints' Sake
Output Type	Artefact
Output Component(s)	Artworks, exhibitions
Dates	2018 – 2019
Dissemination	Exhibition
ORCID	<a href="https://orcid.org/0000-0002-4576-697X">https://orcid.org/0000-0002-4576-697X</a>
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**Figure 2.**  
Exhibition poster,  
Huddersfield Museum and  
Art Gallery 2015

## Additional Information

*For Prints Sake* represents a body of artworks that were produced during a residency at the West Yorkshire Print Shop. 32 prints were exhibited at Huddersfield Museum and Art Gallery. Less toxic etching methods were experimented and tested through the production of the prints.

There has been much debate within the Printmaking community both nationally and globally around the debate of chemistry and less toxic etching. This has brought into question the working methods of printmakers. Traditional methods of etching have not changed much for hundreds of years. Most technical innovations in intaglio printmaking originated in 16th and 17th century. It wasn't until 1994 that Edinburgh Print Workshop began to embrace less toxic and water-based methodology. Less toxic techniques were the replacement of nitric acid and solvents which rendered intaglio printmaking essentially a new discipline.

The reason for the developments was a greater awareness of nitrous gases and more stringent regulations when using chlorine-based cleaning fluids and nitric acid.

*"Friedhard Kiebeben has developed an improved variant of the copper sulphate etch for zinc with the simple addition of sodium chloride. Dubbed the Saline Sulphate Etch, it is three times more active than a straight copper sulphate solution, and produces a very crisp etch without the settled sedimentation and surface roughness of the Bordeaux etch."* (Flick and Grabowski, 2015:111)

Printmakers can become obsessed with process as this can have a huge impact on the outcome of the quality of etching. I wanted to increase my own understanding and awareness of the chemical processes through practice. I also wanted to share this knowledge with the printmaking community at the West Yorkshire Print Shop through both exhibition and teaching.

## Research Context

There has been much debate within the Printmaking community both nationally and globally around the debate of chemistry and less toxic etching. This has brought into question the working methods of printmakers. *"...artist's were seeking out non-toxic and non-flammable materials which would act as acid resists and replace traditional aquatint, stop-out, grounds and their solvents. They discovered that some household acrylic floor finishes could be flow coated onto plates, dried and used as hard ground...In 1997 Friedhard Kiebeben published an article about Edinburgh Etch, the mordant he developed at Edinburgh Printmakers Workshop in Scotland. The etchant consists of ferric chloride with the addition of a small proportion of citric acid"*. (Adam and Robertson, 2007:24)

The Green debate within Printmaking was spearheaded by research at Edinburgh Printmakers Workshop, artist and lecturer Keith Howard in Australia and Canada, artist Mark Garver at Wharepuke studio in New Zealand, Nik Seminoff in Canada and Robert Adam and Carol Robinson's book published from finding from her PhD, Intaglio the complete safety-first system for creative printmaking in 2007.

Each print workshop within a 100mile radius of the midlands where I am based now has different methods, mordants or acids and etching grounds. Everywhere I teach or visit has a different approach to the processes employed within Printmaking, some applying less-toxic means to etch the fine lines in the plates, creating awareness of the consequences of using acid. This research set out to experiment with the strength of mordant, which is compared to the efficiency of nitric acid. I aimed to find out more about the aesthetic potential of mordant and create a language of marks to employ in my own prints. A mordant is a corrosive liquid that will etch metal.

Some print studios etch copper with strong nitric, ferric chloride, Edinburgh etch or cupric chloride. My research suggests that individual printmakers have to engage with the chemical process in order to create new aesthetic results, for example each etchant results in a varying line quality. I claim that the alchemy of printmaking is integral to the finished output. I have explored the relationship between the choice of etchant used and the line quality achieved.

There have been many 'inventions' pertaining to emulate 'original' forms of etching and aquatint. This residency allowed me time to experiment with mixing acrylic resist chemistry and grounds to make an informed judgement around methods of less toxic etching.

## Research Questions

1. How can printmakers utilise less toxic chemistry to achieve controlled and even etching?
2. Can fine line qualities be achieved through copper sulphate and Edinburgh etch mordants?
3. What type of aesthetic properties are achieved?

## Aims and Objectives

- \* To consider the limitations and possibilities of less toxic chemistry for artists use.
- \* To undertake a residency within a print workshop to explore etching chemistry.
- \* To experiment with both zinc and copper to explore the possibilities of line qualities with a variety of etchants and mordants.
- \* To develop a new series of prints for public display that use less toxic techniques for the etching processes.
- \* To utilise narratives of landscape, of belonging and place as subject matter by which to produce a series of etchings.

## Research Methodology

A three-week residency took place over three five day weeks from 2015–2017 this enabled research to take place into line qualities achieved through less toxic etchants and mordants in conjunction with looking for a stable liquid ground that can be layered upon layer without losing stability and cracking when etched.

I spent three weeks, 100 hours at West Yorkshire print workshop developing a body of work testing less toxic methods and materials. These included:

- \* Copper sulphate
- \* Edinburgh Etch
- \* Lascaux grounds
- \* Klear recipes for acrylic resist grounds

Identifying 'gaps' in the published systems and to consider what would be required to constitute improved working methods.

My intention was to spend workshop time understanding the process and chemistry of less toxic etching. The residency enabled me the time and space to test empirically the chemistry of both Edinburgh Etch and Saline sulphate along with less toxic acrylic resist etching grounds. The research tests the application of this process against what I could achieve with traditional methods of nitric acid and bitumen-based grounds.

Professor Ruth Weisberg wrote (2018:65) *"While it is difficult to divide completely material from process, it is valuable to consider each medium's intrinsic properties and visceral appeal. One's interaction with a process is coloured by its physical properties, and their technical possibilities"*

**Open Bite** is an etching technique where open areas of metal are exposed to a mordant such as Edinburgh Etch or Saline Sulphate. The result is that the plate is becomes corroded to a certain depth by the mordant, such that the plate now has variations of thicknesses. The deeper areas will hold flat tones of ink, with ink accumulating around the edges of shapes which are higher.

**Layering of the printed line using chemistry to emulate nitric acid.** I begin slowly with liquid ground and paint shapes and marks. This leaves a large expanse of open plate that will open bite. I'm wanting a stable liquid ground that can be layered upon layer without losing stability and cracking when etched. I have yet to find this apart from within the properties of traditional liquid grounds. I paint numerous layers and etch for long periods of time. The layers can be 10 – 15 high before removal. It is essential the Edinburgh Etch is stable and will not lead to uneven etching or foul bite.

**Public display of exhibited prints within a gallery setting.** For Prints' Sake was an exhibition purely of etchings.

The subject matter of the prints was developed around my interest in a discourse of loss. Of conversations we never had with the people we have lost. By rehearsing the things we wished we had said through marks and images the elusive ghosts of place and deep-seated memories are made present. I have been trying to create affect that evokes a more private curious, dislocation of place. A place for listening. A place of belonging. A personal cartography based on individual journeys. These journeys are places family originated from both in the UK and Ireland.

Physical location enables an embodied response to landscape and allows an engagement in questions concerned with belonging, rootedness, and home.



The space between us. The imagery for me in this work is memoriam and a remapping. Mapping not in the sense of a literal cartography but mapping as a feeling and emotional connection with a place. This is evolved over time by inhabiting the real, the internalised and imagined. Memory is an essential part of who we are and guides us through how we sense loss, place and experience.

Printmaking is essential to the work, it is symbiotic with the idea. The etching process and materiality of printmaking becomes a spontaneous transcription of feelings and memories. Initial sketches act as departure points for more complex ideas and a remapping of my journeys. These sketches are the basis for ideas and multi layered conversations about how we navigate place and space.

The prints meditate on fragments of memory, they are contemplative by nature. They remain asymmetrical with fluid remnants of shape and a gentle motion covering the surface. The layering maintains a sparse-ness of sporadic marks and linearity. The implication of somewhere or someplace subtly intersects with textures and line.

The prints are paradoxically both tranquil and busy.

## Residency at West Yorkshire Print Workshop 2015–2017

### Technical information plate making with zinc and copper

- \* Etching plates in process, both zinc and copper etched with mordants.
- \* 4 parts ferric chloride solution + 1 part citric acid = Edinburgh Etch
- \* 4 litres of ferric chloride solution + 1 litre hot water mixed with 300g citric acid powder creates a 42–45 Baume mordant. The Baume scale describes the specific weight of liquids, and by implication the strength of the mordant, and can be measured using a hygrometer.
- \* Saline Sulphate is 5 litres of tap water mixed with 250 grams of copper sulphate and 250 g of table salt
- \* This mordant can be rejuvenated by mixing 100 grams of copper sulphate and salt with half a litre of water. This is then mixed with the original solution.
- \* The plates are inked and wiped traditionally with ink being pressed into the etched grooves and surfaces within the plate.
- \* The lines are heavily etched to ensure an indent is achieved around each shape. The plate is inked using a Charbonnel stiff dense black ink and printed on Hahnemuehle paper. The paper is soft and ensures every mark is evident, this will add to the subtlety of the final print.

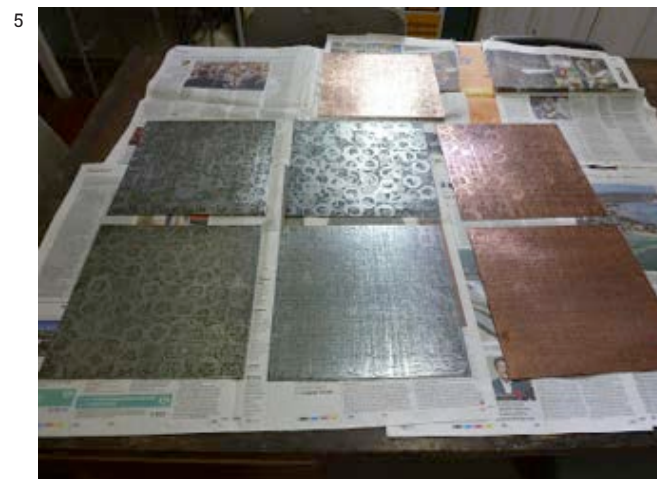


**Figure 3+4.** Plates from the series Still Navigating.



3

4



**Figure 5.** Plates from the series Drawn in the Margins.



**Figure 6.** A plate from Drawn in the Margins being inked.

5

6





7

**Figure 7.** Zinc plate is being layered with liquid etching ground. This is an unconventional method of using etching grounds, usually grounds are rolled and drawn into with an etching needle.



8

**Figure 8.** The plate is being cleaned and polished ready for printing.

9



**Figure 9.** The plates are being responded too, either more etching will take place or they will be printed and proofed for evaluation.

10



**Figure 10.** The etching plates are being proofed either for editioning or more work.



11

**Figure 11.** Etching on copper using Edinburgh etch.

12



**Figure 12.** The copper plates have been etched using layers of liquid etching ground. Layers can be 10 – 15 high before the removal of the ground. This gives each plate areas of even open bite to hold ink.

# In Memoriam

There were three new series of works produced for the exhibition Print's Sake.

In Memoriam was the series that won the Flourish award for excellence in printmaking initially exhibited at West Yorkshire Print Workshop Gallery. This is based in Mirfield and has a national following in the printmaking community.

In Memoriam was concerned with a place of memorial and pilgrimage.

13

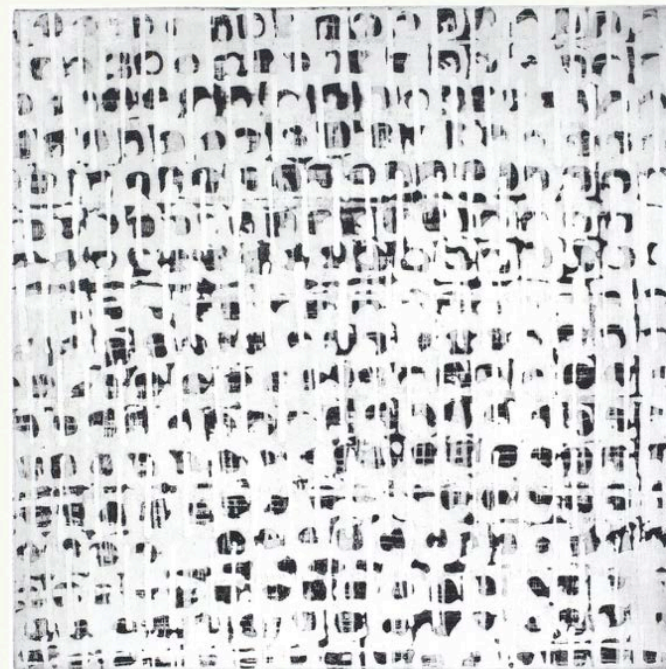


Figure 13.  
In Memoriam 1  
Etching on zinc 30x30cm



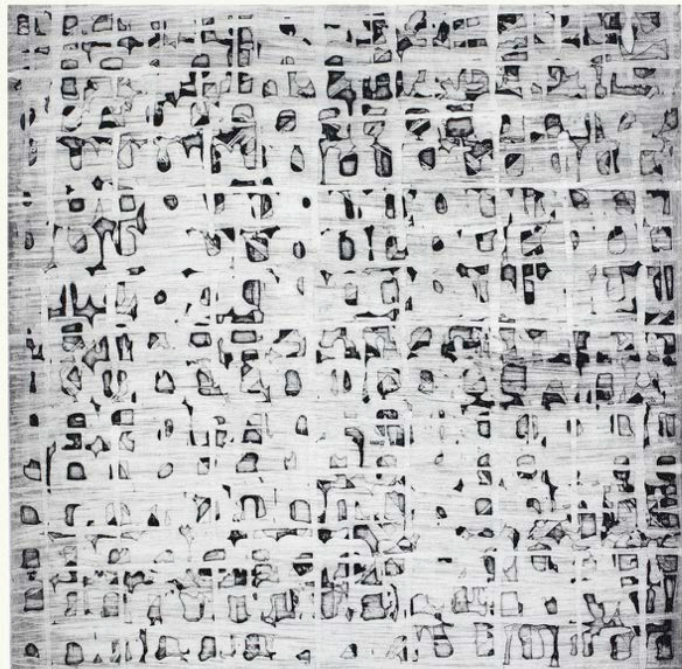


Figure 14.  
In Memoriam 4  
Etching on zinc 30x30cm

14

15



Figure 15.  
In Memoriam 6  
Etching on zinc 30x30cm

# Still Navigating

The second iteration of etchings, *Still Navigating* consisted on 13 zinc squares made at West Yorkshire Print Workshop exploring copper sulphate mordant.

I had 100 hours of studio time as a result of the Flourish Award. *Still Navigating* was exhibited at West Yorkshire Print Workshop Gallery and curated with Samantha Manton.

I delivered a summer school workshop over three days in response to my approach to etching *Take a line for a walk – Learn to etch in a less conventional way.*

16



17



**Figures 16+17.**  
Display of *Still Navigating* at West Yorkshire Print Workshop Gallery 2015

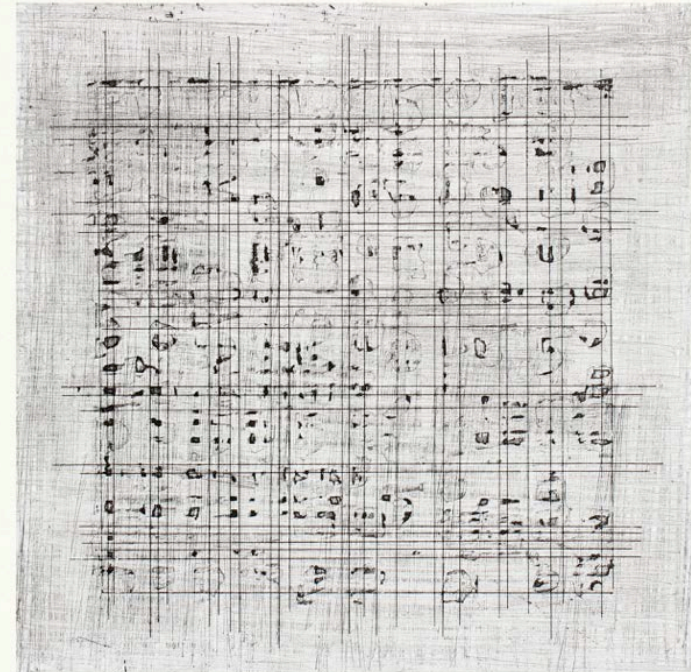


# Drawn in the Margins

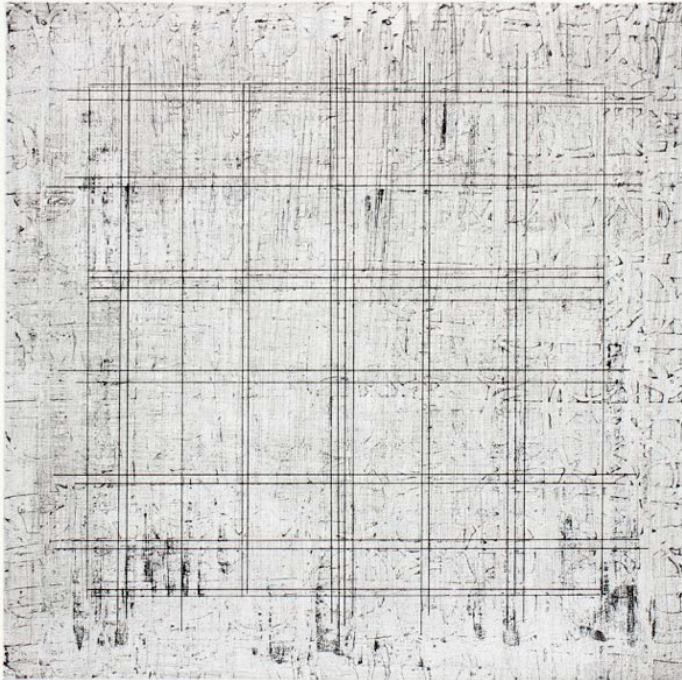
The third iteration Drawn in the Margins were the final series of prints in progress and completed in 2017. A number selected by the curator Grant Scanlon for the exhibition at Huddersfield Museum and Art Gallery

Clusters of these three iterations were subsequently selected to be exhibited at Leicester Print Workshop Gallery, Tarpey Gallery Castle Donnington and Gallery 57 Arundel.

18



**Figure 18.**  
Drawn in the Margins 2  
Etching on zinc 30x30cm



**Figure 19.**  
Drawn in the Margins 13  
Etching on zinc 30x30cm

19

The themes and context for all three iterations of prints are 'I am in Transit.' I live and work in numerous places and drive up and down the motorways. It's a liminal existence. I collect imagery when on Romney Marsh that informs a visual conversation. It is a desolate, peripheral place on the far South East Coast of Britain. There is a strong connectivity between self and place. There is a familiarity. An understanding of place.

I began with drawing, often rapidly. I will make numerous visits to the same place, in different seasons, weather and light. The repetitive fieldwork enables the place to be revealed alongside a broader context for the work. The layers of complexity become a palimpsest as earlier drawings are reworked like an etching plate, redrawn on top. These initial sketches act as departure points for more complex ideas and a remapping of my journeys. These sketches are the basis for ideas and multi layered conversations about how we navigate place and space.

Once I have returned to my print studio, there is dislocation from place. I begin with a series of square plates. The square is important as this is a deliberate strategy to depart from the mimetic and representational. Familiarity as the adage goes 'breeds contempt' and it is my intention to draw the viewer to something other. Other than representational landscape and literal. It is now that memory and emotion and relied upon. The prints look for balance using repetition of both circles and grids within a perfect square. Printmaking is essential to the work, it is symbiotic with the idea. The etching process and materiality of Printmaking becomes a spontaneous transcription of feelings and memories, both familiar and elusive.

The results are intricate and complex multi-layered prints that resist literal interpretation and lack referential scale, honouring instead a physically charged and deeply personal mapping of the environment.

Clusters of these three iterations were selected to be exhibited at Leicester Print Workshop Gallery, Tarpey Gallery Castle Donnington and Gallery 57 Arundel.

## Insights

A good ground must have the following properties: - It must be impervious to acid.

It must be sufficiently hard to allow of being freely handled and to prevent adhesion to the drawing as the drawing develops

Lascaux and Klear work well for single line etching but not building up layers of painted ground, which is my preference for working. The result was imperfections and cracking. The ground was expensive and extremely difficult to remove once layered. Lascaux does not adhere readily to a metal plate. It is a plastic. The artist has to colour it as it is transparent so work cannot be seen through the ground.

It was not quick drying.

Products tested, Lascaux Hard Resist, Lascaux Soft Resist and Lascaux Stop-out Resist.

Copper sulphate with added salt is a tested etchant for both zinc and aluminium.

Recipes in strength vary depending on artist's choice.

My finding is while the etchant is reliable the marks are flatter and line quality wider than nitric mixed 1-12 with water.

I ended up etching fine lines with nitric as the quality of mark was not fine enough.

I etch with large areas of open bite, copper sulphate becomes unstable and leaves pitted and uneven areas within zinc plates.

Printmaker's will make decisions about the choices of chemistry and grounds depending on their studio environment and economics. Traditional methods require extraction, safety equipment and careful handling.

Less toxic printmaking maybe deemed more environmentally friendly but it's less toxic, not a non-toxic process. My time undertaking this research and the

testing of less toxic process enabled me to question is it fit for purpose? It is not a straight swap. It's a different process from traditional etching. It may be hailed as a solution to toxicity by workshops that use it. But there are compromises.

Everywhere I teach or visit has a different approach to Printmaking. I prefer to control the strength of mordant or acid I am using rather than subscribe to a workshop technician's choice. Some workshops etch copper with strong nitric, ferric chloride, Edinburgh etch or cupric chloride. Each printmaker will have a preference and know each etchant results in a varying line quality. I prefer to mix my own etchant and have personal preference. The alchemy of printmaking is integral to the output. I change the choice of etchant dependant of the line quality I wish to achieve.

This less toxic method does something other than traditional methods.

Less toxic etching is still in its infancy and in printmaking years is very new. There is a long way to go for the new chemistry, grounds and solvents to work as efficiently as traditional methods. By this I mean the line quality is courser and the chemistry is less stable thus resulting in more foul bite<sup>1</sup> when first mixed.

<sup>1</sup> Foul Bite is unintentional marks which appear on the plate due to the action of a mordant, usually because the chemical that protects the surface of the plate is cracked or has small holes in it. The result can be uneven marks or fine dots.

## Dissemination

### Public and academic talks

[http://www.leicesterprintworkshop.com/exhibitions-and-projects/exhibitions/drawn\\_in\\_the\\_margins\\_-\\_michelle/](http://www.leicesterprintworkshop.com/exhibitions-and-projects/exhibitions/drawn_in_the_margins_-_michelle/)

### Press Coverage

<https://wypw.org/tutors/michelle-keegan/>

<https://www.gallery57.co.uk/michelle-keegan>

<https://www.creativekirklees.com/huddersfield-art-gallery/for-prints-sake-michelle-keegan-flourish-exhibition/>

<http://keeganarts.blogspot.com/2015/11/huddersfield-art-gallery.html>



20

**Figure 20.**  
Huddersfield Museum  
and Art Gallery 2016

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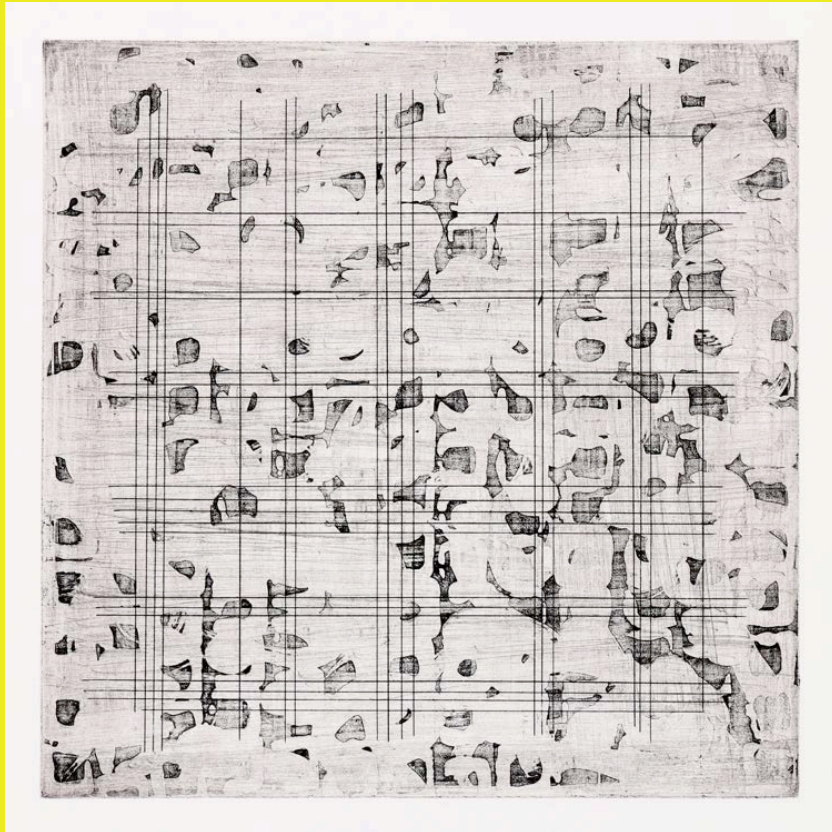
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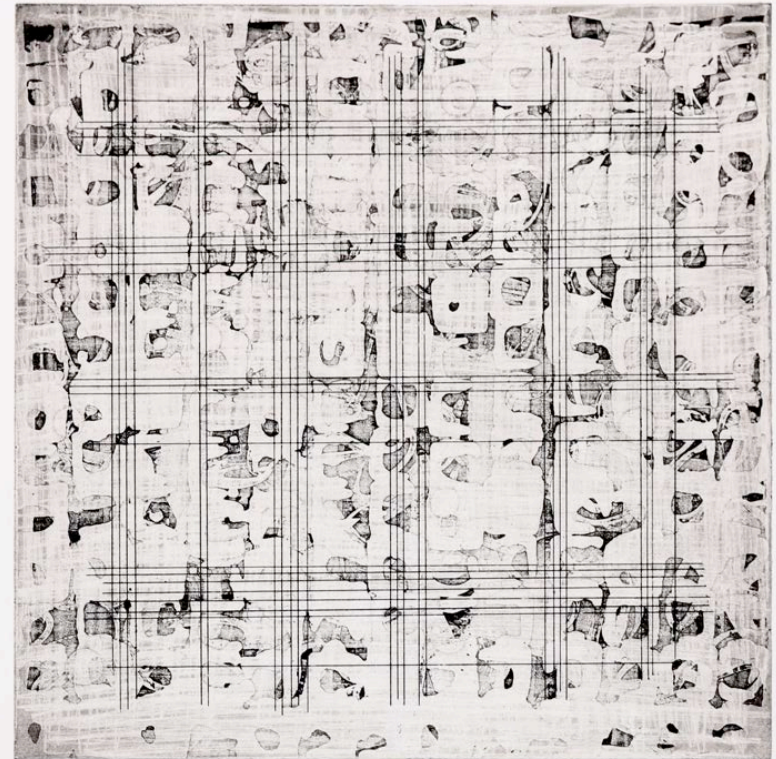
Selected prints from the residency and  
exhibition 2015-2017



**Figure 21.**  
Still Navigating 1  
Etching on zinc 30x30cm

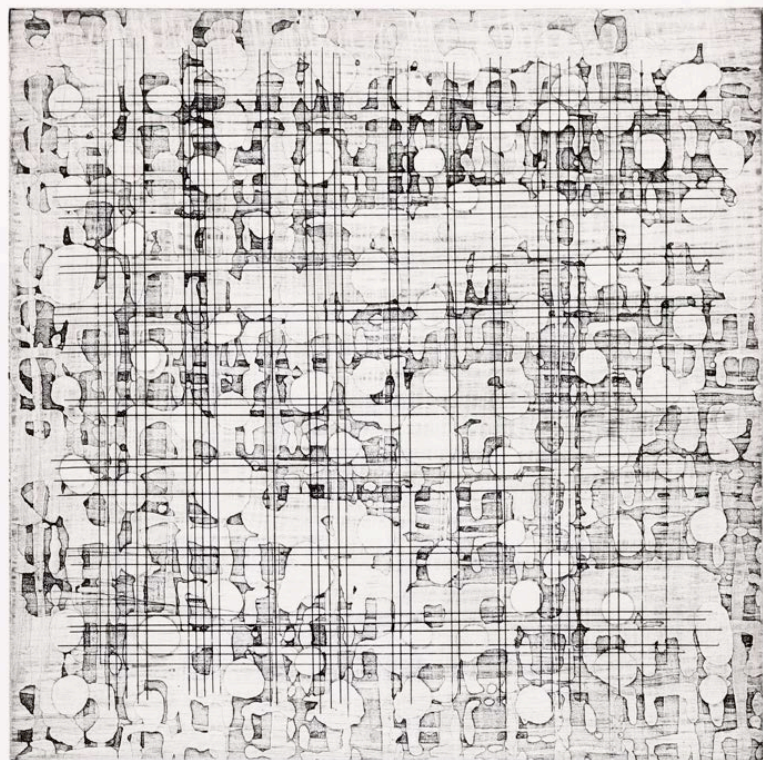
21

22



**Figure 22.**  
Still Navigating 2  
Etching on zinc 30x30cm

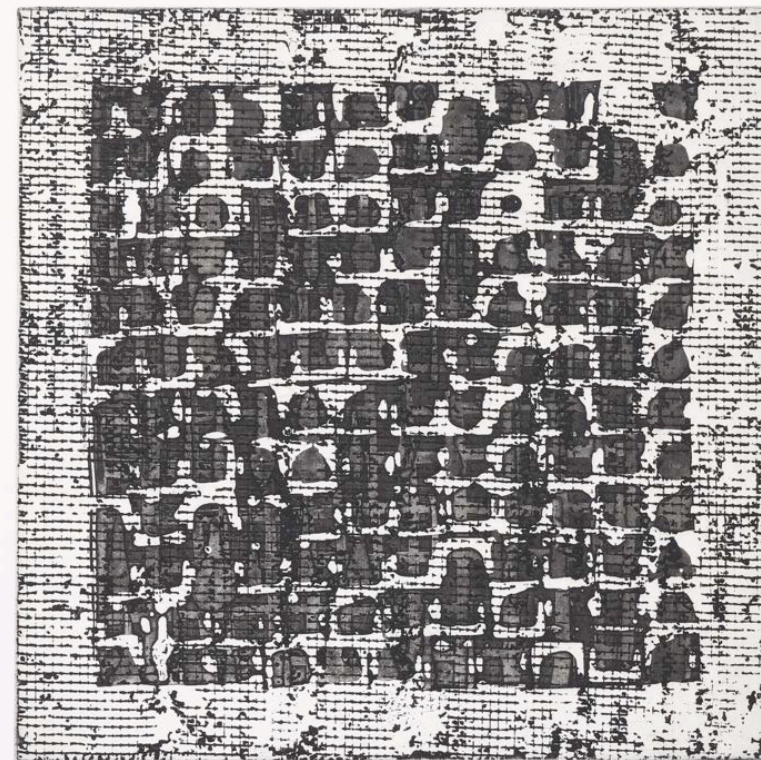




**Figure 23.**  
Still Navigating 3  
Etching on zinc 30x30cm

23

24



**Figure 24.**  
Still Navigating 9  
Etching on zinc 30x30cm



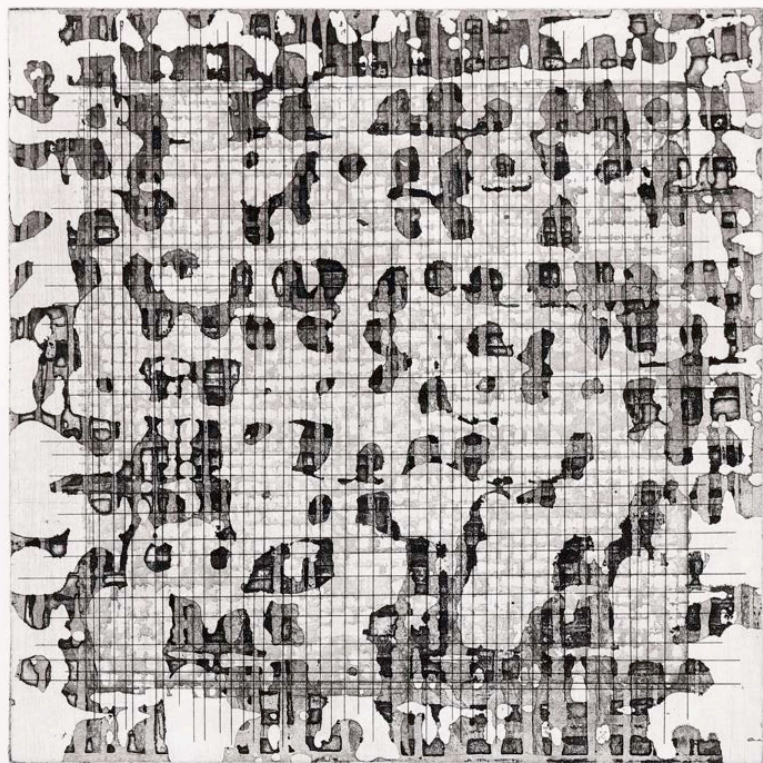


Figure 25.  
Still Navigating 11  
Etching on zinc 30x30cm

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26

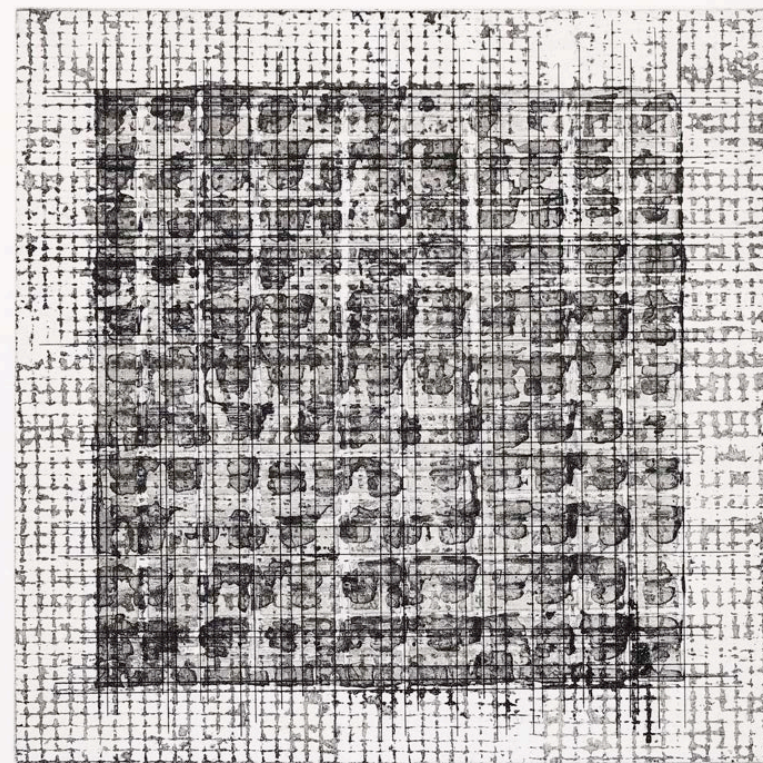


Figure 26.  
Still Navigating 12  
Etching on zinc 30x30cm



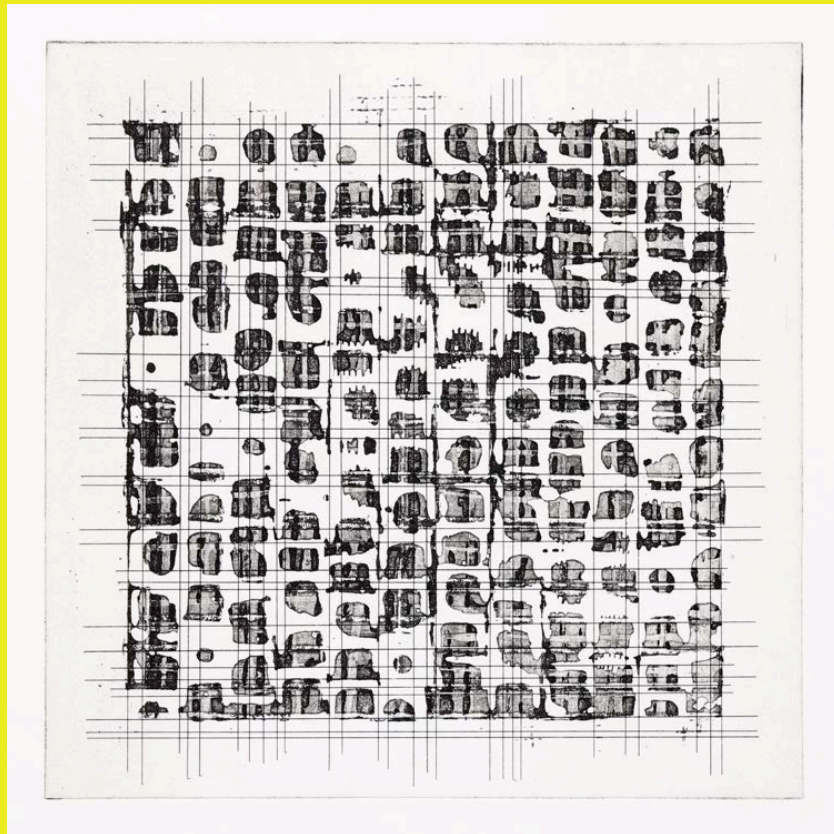


Figure 27.  
Still Navigating 14  
Etching on zinc 30x30cm

27

28

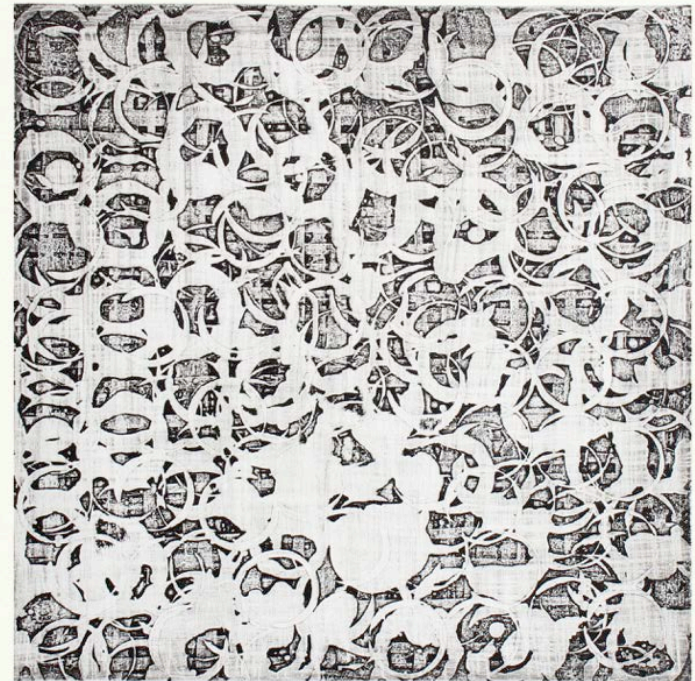
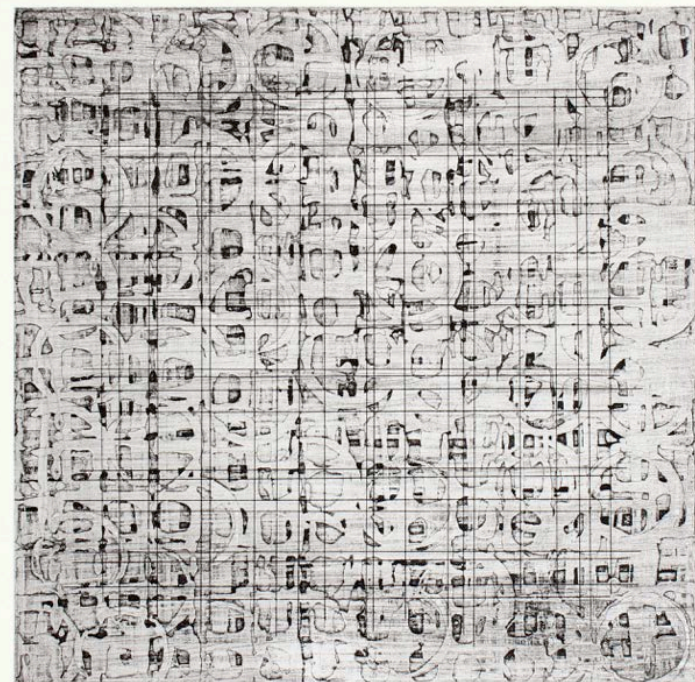


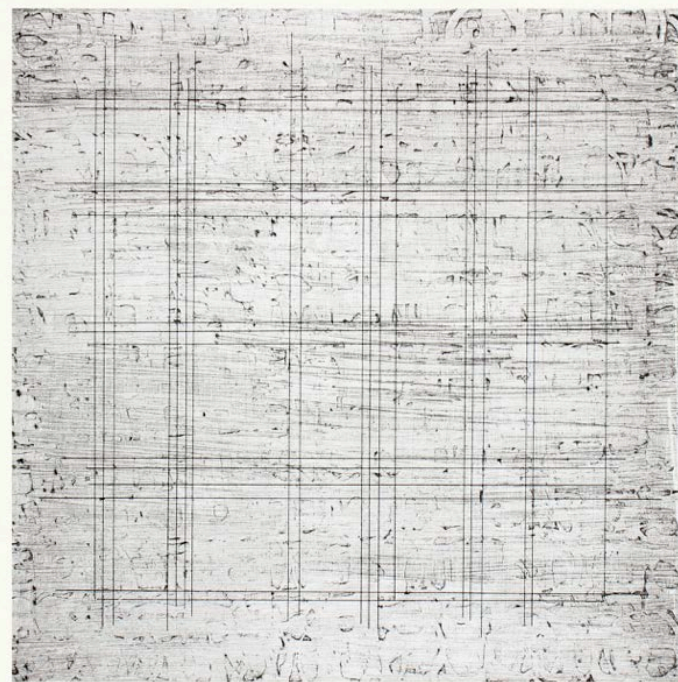
Figure 28.  
Drawn in the Margins 8  
Etching on Zinc 2015 30x30cm



**Figure 29.**  
 Drawn in the Margins 6  
 Etching on Zinc 2015 30x30cm

29

30



**Figure 30.**  
 Drawn in the Margins 14  
 Etching on Zinc 2015 30x30cm

COLOPHON

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